

Understanding hearing loss



The Shepherd Centre

Giving deaf children a voice



Welcome to The Shepherd Centre guide to understanding hearing and hearing loss

The Shepherd Centre is a registered charity that provides a family-centred early intervention program to teach children with hearing loss of any degree to develop spoken language.

We know that by providing families with support to develop their child's listening spoken language, they can achieve their complete potential and participate fully in society.

The vast majority of children graduating from our world-leading program achieve spoken language at the same level as normal hearing children by the time they are ready for school. These outcomes have earned The Shepherd Centre an international reputation as a centre of excellence in helping children with hearing loss learn to listen and speak.

About this booklet

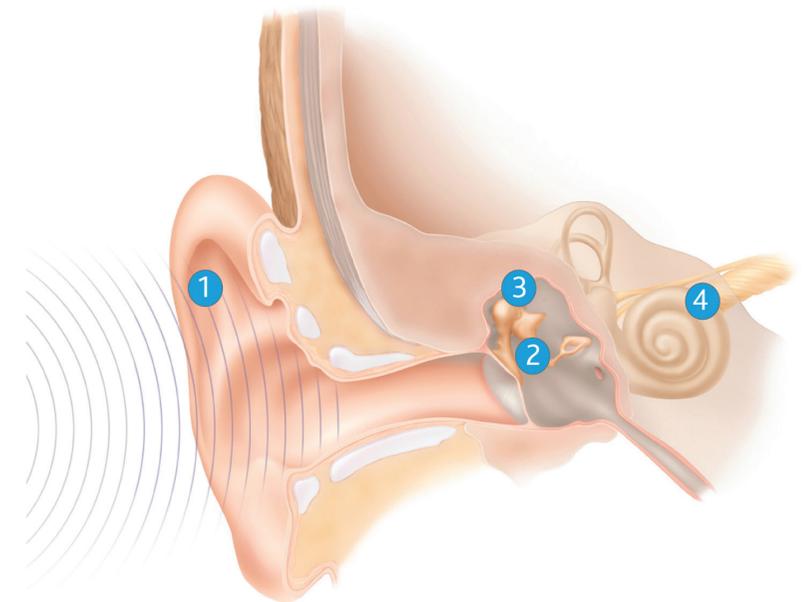
Hearing is important as it enables us to lead our day-to-day lives without limits. It enables us to **communicate**, stay connected to the outside world and keep us from danger by warning us of potential hazards.

The information in this booklet can be useful to help you spot the signs of hearing loss so that you can take the steps to help reduce your risk, or those close to you, of developing hearing loss.

Spotting the signs of hearing loss as soon as possible is vital – outcomes are often more positive if acted on early.

How do we hear?

- 1 Sound waves are guided down your ear canal by the pinna.
- 2 The sound waves hit your ear drum and it vibrates.
- 3 The small ossicles vibrate with the ear drum, transferring the sound across the middle ear to the cochlea.
- 4 The fluid inside the cochlea picks up the vibrations and carries them to the thousands of tiny hair cells. These hair cells change the movement into electrical impulses which are sent along the auditory nerve to the brain. The hearing centre of the brain interprets the impulses as sound.



The auditory cortex receives the sound and interprets it into meaning so we can understand and use it (not pictured).

Preventing hearing loss

Sometimes hearing loss is a natural part of getting older, however, hearing loss caused by exposure to loud noises may be completely avoidable.

No matter your age, there are simple steps you can take to prevent harm to your hearing.

Steer clear of loud noises or use noise protection

Typically, a sound is in the range at risk of damaging your hearing if:

- you need to increase the level of your speech to be heard by others
- you struggle to make out what people close by are saying even when you are looking at them
- you experience ringing or buzzing in your ears after you have left the noisy place



Did you know...

The best way to avoid noise-induced hearing loss is to keep away from loud noise as much as you can.

Take care when listening to music

Listening to loud music through headphones can be a huge danger to your hearing.

It is important not to turn the volume up while using headphones to cover up outside noise.

Limit time spent at loud events

Hearing loss can be caused from exposure at loud activities and events (such as at nightclubs, gigs or sports events).

Consider wearing earplugs and move away from sources of loud noises; try to take a break every 15 minutes.

Take safety measures at work

If you're exposed to loud noises through your work it can affect your hearing.

Your employer is obliged to make changes to reduce your exposure to loud noise. Make sure you wear any hearing protection you're given and develop an understanding of the allowable safe noise exposure dose.¹

Get a hearing test as soon as possible if you're concerned about your hearing. The earlier hearing loss is identified, the earlier something can be done about it.

¹ <http://www.betterhearing.org.au/about-hearing-loss/prevention/>
<https://hearsmart.org/>

Signs of hearing loss



Most hearing losses tend to get worse over time so it's important to detect a problem sooner rather than later to receive the right treatment.

If you have concerns about your hearing, ask yourself:

- Do you have difficulty hearing conversations, especially in background noise?
- Do you frequently ask people to repeat themselves?
- Do you need the TV louder than your family wants it?
- Do you have difficulty hearing people on the phone?
- Do you experience ringing in your ears?

If you answer yes to any of the above questions, it's time to talk to your health professional.

Types of hearing loss

A variety of biological and physical processes can cause hearing loss, which can be either congenital (you're born with it) or acquired (you get it later in life). There are four main categories:

- 1 **Conductive** hearing loss stems from problems in the outer or middle ear. It can be caused by something blocking the movement of sound through the ear. This may or may not be a permanent type of hearing loss.
- 2 **Sensorineural** hearing loss occurs when the part of the ear that changes sound into electrical information (the cochlea) and/or the part of the ear that sends that electrical information to the brain (the auditory nerve) is damaged. This type of hearing loss is usually permanent. It can relate to genetic factors or be caused by ageing, some diseases or exposure to noise and chemicals.
- 3 **Mixed** hearing loss is due to a combination of the conductive and sensorineural varieties. For example, someone may have sensorineural hearing loss caused by ageing or a genetic condition, and conductive loss from middle-ear fluid at the same time.
- 4 **Retrocochlear** hearing loss occurs when the auditory nerve or in the brain is affected. Although sound is processed properly by the inner ear, the auditory nerve has difficulty transmitting it to the brain. People with a retrocochlear loss tend to have trouble listening in the presence of background noise.

Spotting the signs of hearing loss in babies and young children

Did you know hearing loss is one of the most common disabilities diagnosed at birth? The incidence of hearing loss more than doubles in the first five years of life. 1 in 1000 babies are diagnosed with hearing loss at birth which increases to 1 in 300 by school age. ²

Babies begin to recognise and distinguish voices when they are a few months old, often cooing or babbling in response. If unmanaged, a child's hearing loss will impact their ability to hear and develop spoken language. This then has a knock-on effect on education, working life and general capacity to reach their full potential.

- Newborn babies will often have a physical reaction to sudden noises. They will often look towards the source of a sound.
- By 6 months babies may start to voice sounds that resemble words.
- By 9 months they begin to recognise basic words like “milk”, “bath” or the names of family members. At 12 months they will most often be using words like “Mama” or “bye-bye”.

The earlier your child is tested, diagnosed and supported with hearing loss, the greater their chances of reaching their potential.

² Mason, J. A., & Herrmann, K. R. (1998). Universal infant hearing screening by automated auditory brainstem response measurement. *Pediatrics*, 101(2), 221-228.

Stevens, G., Flaxman, S., Brunskill, E., Mascarenhas, M., Mathers, C. D., & Finucane, M. (2011). Global and regional hearing impairment prevalence: an analysis of 42 studies in 29 countries. *The European Journal of Public Health*, 23(1), 146-152.



If you suspect your child may have hearing loss, it is crucial to act early and seek professional help as soon as possible.

Does someone you know have hearing loss?

Hearing loss can be a very sensitive, personal matter for many people. It isn't unusual for people to grieve the loss of their hearing or ignore it. It is often people around them that notice it first.

Talking about hearing loss can be hard when a person is struggling to accept it and sees it as a sign of aging. It is important to have a conversation in a delicate way and make every effort to avoid upsetting a friend.

Choose a private, quiet place to talk

Be mindful not to bring it up in the instant; such as when your loved one has frequently asked you to repeat a sentence in a short space of time. Think about the conversation in advance and choose the time and setting wisely.

Come from a place of love

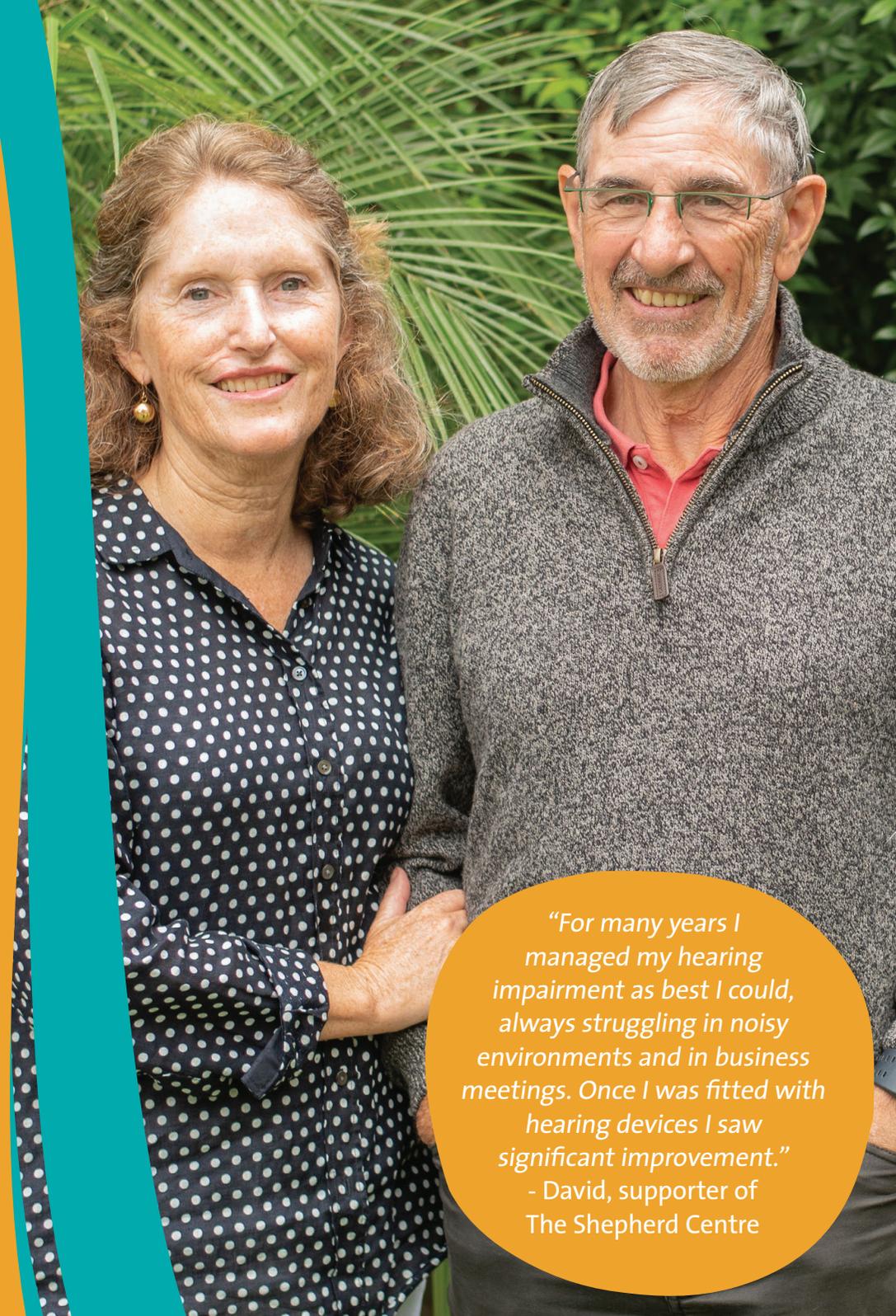
This is crucial to show you are there to help. A person may feel criticised and become defensive if you show signs of frustration.

Assume they are already aware

People often recognise they are having issues with their hearing and need to seek out help. A delicate way to introduce the topic could be, "I noticed lately you've had your music on rather loud, I wondered if it's possible you could be having trouble hearing."

Be understanding

Pay attention to your loved one's anxieties and do more listening if they are open to talking. Express that you recognise your loved one's reservations and worries. It is important to start the conversation with compassion and gentle concern before presenting your opinions.



"For many years I managed my hearing impairment as best I could, always struggling in noisy environments and in business meetings. Once I was fitted with hearing devices I saw significant improvement."
- David, supporter of The Shepherd Centre



The Shepherd Centre is a charity for children with hearing loss. Our vision is to enable children who are deaf or hearing impaired to develop spoken language so they may fully participate in the world and in doing so reach their full potential.

This booklet has been designed as a guide to help you develop an understanding of hearing loss. Hearing loss can be sudden but it can be hard to spot the signs when it is gradual, so it's important to be aware so you can take action sooner.

Do the following if you have any concerns:

- Take action – the sooner the better
- Ask your GP for advice
- Speak to someone
- Take a friend or loved one to get checked by an audiologist



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The Shepherd Centre is a registered charity, if you would like information on how to fundraise or donate:

Visit: www.theshepherdcentre.org.au • Call: 1800 020 030

Email: enquiries@shepherdcentre.org.au